



Application No.

10/526,308

Confirmation No. 3846

Applicant(s)

Markus OHNMACHT et al.

Filed

March 2, 2005

TC/A.U.

3752

Examiner

Trevor McGraw

Docket No.

R.304253

Customer No.

02119

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Date: July 20, 2007

## <u>INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97(c)</u>, AND EXPLANATION OF THE RELEVANCE OF THE CITED PRIOR ART

Sir:

The undersigned hereby requests that the prior art cited on the attached prior art statement be placed of record in the application file.

This citation of prior art is made under 37 CFR 1.97(c), since it is being filed prior to any Final Action, and is being accompanied by the fee of \$180 as set forth in 37 CFR 1.17(p).

The relevance of the prior art cited on the attached form PTO/SB/08a is as follows:

## US 6,427,932 B1

The invention relates to a fuel injection nozzle for an internal combustion engine, especially of a common-rail injection system. The injection nozzle contains a nozzle needle which is coupled to an actuating element that serves to control a nozzle opening process. The nozzle needle comprises a needle point and a valve seat which interacts with the same. The valve seat has a conical sealing surface with an opening angle  $\alpha 1$ , and the needle point has a conical sealing surface with an opening angle  $\alpha 2$ . The opening angle  $\alpha 2$  of the sealing surface of the needle point is smaller than the opening angle  $\alpha 1$  sealing surface of valve seat. An

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expansion, said expansion serving as a cavitation chamber, of a ring-shaped flow channel, is configured between the needle point and the needle housing in the direction of flow of the fuel following the sealing surfaces of the needle point and valve seat. The cavitation chamber is configured and dimensioned to achieve a targeted cavitation results.

JP 2001-12334

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This invention shows a peripheral groove (4) is formed in the inner wall surface (3) of a nozzle body, and a nozzle hole entrance (5) is arranged in relation to the peripheral groove (4) so that the nozzle body rear end side part (6) relative to the nozzle hole entrance is overlapped with the nozzle body tip side part (8) of the peripheral groove, the nozzle body tip side part (7) relative to the nozzle hole entrance 5 is not overlapped with the peripheral groove is not overlapped with the nozzle body rear end side part (9) relative to the peripheral groove is not overlapped with the nozzle hole entrance (5).

The Commissioner is hereby authorized to charge payment of the fee of \$180, or any/all fees associated with this communication to Deposit Account 07-2100.

Examination of this application is respectfully requested.

Respectfully submitte

Ronald E. Greigg Registration No.

Attorney for Applicant(s)

GREIGG & GREIGG, P.L.L.C. 1423 Powhatan Street Suite One Alexandria, VA 22314

Telephone: 703-838-5500 Facsimile: 703-838-5554

Customer No. 02119

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

Substitute for form 1449A/PTO

Complete if Known				
Application Number	10/526,308			
Filing Date	March 2, 2005			
First Named Inventor	Markus OHNMACHT et al.			
Art Unit	3752			
Examiner Name	Trevor McGraw			
Attorney Docket Number	R.304253			

	U.S. PATENT DOCUMENTS						
Examiner Initials	Examiner Cite Initials No.1 Number-Kind Code 2 (# known)		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		US- 6,427,932 B1	08-06-2002	Bernd Danckert et al.			
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	FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Τe
		JP 2001-12334 .		01-16-2001	Yoshimasa Watanabe et al.		$oxed{\Box}$
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Examiner	2	Date	
Signature		Considered	·

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Senter Office that issued the document, by the two-letter code (WIPO Standard ST.3). Japanese patent documents, the indication of the year of the reign of the Emperor must precede the senal number of the patent document. 5Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.